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ENTRY

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FULL ESTIMATED COST

0.22

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FILE 'REGISTRY' ENTERED AT 19:17:46 ON 10 DEC 2009

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DICTIONARY FILE UPDATES: 9 DEC 2009 HIGHEST RN 1196786-45-4

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=>

Uploading C:\Program Files\STNEXP\Queries\580974.str



chain nodes :

2 3 4 5 6 8 9 11

chain bonds :

2-3 2-4 2-5 2-6 4-9 5-11 6-8

exact/norm bonds :

2-3 2-4 2-5 2-6 4-9 5-11 6-8

G1:B,Al,As,Ga,In,Sb

G2:Cb,Cy,Hy,Ak

Match level :

2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 8:CLASS 9:CLASS 11:CLASS

L1 STRUCTURE UPLOADED

=> d his

(FILE 'HOME' ENTERED AT 19:17:29 ON 10 DEC 2009)

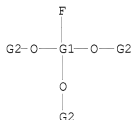
FILE 'REGISTRY' ENTERED AT 19:17:46 ON 10 DEC 2009

L1 STRUCTURE UPLOADED

=> d l1

L1 HAS NO ANSWERS

L1 STR



G1 B,Al,As,Ga,In,Sb

G2 Cb,Cy,Hy,Ak

Structure attributes must be viewed using STN Express query preparation.

=> s l1

SAMPLE SEARCH INITIATED 19:18:09 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 500 TO ITERATE

100.0% PROCESSED 500 ITERATIONS

5 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*

BATCH \*\*COMPLETE\*\*

PROJECTED ITERATIONS: 8659 TO 11341

PROJECTED ANSWERS: 5 TO 234

L2 5 SEA SSS SAM L1

=> s l1 full

FULL SEARCH INITIATED 19:18:17 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 10229 TO ITERATE

100.0% PROCESSED 10229 ITERATIONS

70 ANSWERS

SEARCH TIME: 00.00.01

L3 70 SEA SSS FUL L1

=> fil caplus

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	185.88	186.10

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FILE COVERS 1907 - 10 Dec 2009 VOL 151 ISS 24  
 FILE LAST UPDATED: 9 Dec 2009 (20091209/ED)  
 REVISED CLASS FIELDS (/NCL) LAST RELOADED: Oct 2009  
 USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Aug 2009

CAPLUS now includes complete International Patent Classification (IPC) reclassification data for the third quarter of 2009.

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<http://www.cas.org/legal/infopolicy.html>

This file contains CAS Registry Numbers for easy and accurate substance identification.

```
=> s l3
L4          43 L3

=> s l4 and py<=2004
      25161915 PY<=2004
L5          29 L4 AND PY<=2004

=> s l5 and perfluorinated
      6862 PERFLUORINATED
L6          0 L5 AND PERFLUORINATED

=> s l5 and partially fluorinated
      369899 PARTIALLY
      43174 FLUORINATED
      1316 PARTIALLY FLUORINATED
            (PARTIALLY(W)FLUORINATED)
L7          0 L5 AND PARTIALLY FLUORINATED

=> d 1-29 bib abs
L7 HAS NO ANSWERS
'BIB ABS ' IS NOT A VALID STRUCTURE FORMAT KEYWORD
Structure Formats
SIA ----- Structure Image, Attributes, and map table if it contains
              data. (Default)
SIM ----- Structure IMAGE.
SAT ----- Structure ATtributes and map table if it contains data.
SCT ----- Structure Connection Table and map table if it contains
```

data.

SDA ----- All Structure Data (image, attributes, connection table and map table if it contains data).

NOS ----- NO Structure data.

ENTER \$STRUCTURE FORMAT (SIA), SCT, SDA, SIM, SAT, NOS:end

=> d 15 1-29 bib abs

L5 ANSWER 1 OF 29 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2004:900028 CAPLUS

DN 142:68010

TI From weakly coordinating to non-coordinating anions? A simple preparation of the silver salt of the least coordinating anion and its application to determine the ground state structure of the Ag( $\eta^2$ -P<sub>4</sub>)<sup>2+</sup> cation

AU Bihlmeier, Angela; Gonsior, Marcin; Raabe, Ines; Trapp, Nils; Krossing, Ingo

CS Institut fuer Anorganische Chemie, Universitaet Karlsruhe, Karlsruhe, 76128, Germany

SO Chemistry--A European Journal (2004), 10(20), 5041-5051

CODEN: CEUJED; ISSN: 0947-6539

PB Wiley-VCH Verlag GmbH & Co. KGaA

DT Journal

LA English

OS CASREACT 142:68010

AB The unexpected but facile preparation of the Ag salt of the least coordinating [(RO)3Al-F-Al(OR)3]- anion (R = C(CF<sub>3</sub>)<sub>3</sub>) by reaction of Ag[Al(OR)<sub>4</sub>] with one equivalent of PCl<sub>3</sub> is described. The mechanism of the formation of Ag[(RO)3Al-F-Al(OR)3] is explained based on the available exptl. data as well as on quantum chemical calcs. with the inclusion of entropy and COSMO solvation enthalpies. The crystal structures of (RO)3Al(OC<sub>4</sub>H<sub>9</sub>), Cs[(RO)2(Me)AlFAl(Me)(OR)2], Ag(CH<sub>2</sub>Cl<sub>2</sub>)3[(RO)3AlFAl(OR)3] and Ag( $\eta^2$ -P<sub>4</sub>)2[(RO)3AlFAl(OR)3]- are described. From the collected data the [(RO)3AlFAl(OR)3]- anion is the least coordinating anion currently known. With respect to the F- ion affinity of two parent Lewis acids Al(OR)<sub>3</sub> of 685 kJ mol<sup>-1</sup>, the ligand affinity (441 kJ mol<sup>-1</sup>), the proton and Cu decomposition reactions (-983 and -297 kJ mol<sup>-1</sup>) as well as HOMO level and HOMO-LUMO gap and in comparison with [Sb<sub>4</sub>F<sub>21</sub>]-, [Sb(OTeF<sub>5</sub>)<sub>6</sub>]-, [Al(OR)<sub>4</sub>]- as well as [B(RF)<sub>4</sub>]- (RF = CF<sub>3</sub> or C<sub>6</sub>F<sub>5</sub>) the [(RO)3Al-F-Al(OR)3]- anion is among the best weakly coordinating anions (WCAs) according to each value. In contrast to most of the other cited anions, the [(RO)3AlFAl(OR)3] anion is available by a simple preparation in conventional inorg. labs. The least coordinating character of this anion was employed to clarify the question of the ground state geometry of the Ag( $\eta^2$ -P<sub>4</sub>)<sup>2+</sup> cation (D<sub>2h</sub>, D<sub>2</sub> or D<sub>2d</sub>). In agreement with computational data and NMR spectra it could be shown that the rotation along the Ag-(P-P-centroid) vector has no barrier and that the structure adopted in the solid state depends on packing effects which lead to an almost D<sub>2h</sub> sym. Ag( $\eta^2$ -P<sub>4</sub>)<sup>2+</sup> cation (0 to 10.6° torsion) for the more sym. [Al(OR)<sub>4</sub>]- anion, but to a D<sub>2</sub> sym. Ag( $\eta^2$ -P<sub>4</sub>)<sup>2+</sup> cation with a 44° twist angle of the two AgP<sub>2</sub> planes for the less sym. [(RO)3AlFAl(OR)3]- anion. This implies that Ag back bonding, suggested by quantum chemical population analyses to be of importance, is only weak.

OSC.G 24 THERE ARE 24 CAPLUS RECORDS THAT CITE THIS RECORD (24 CITINGS)

RE.CNT 90 THERE ARE 90 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 2 OF 29 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2004:900026 CAPLUS

DN 142:63045

TI Relative stabilities of weakly coordinating anions: A computational study

AU Krossing, Ingo; Raabe, Ines

CS Institut fuer Anorganische Chemie, Universitaet Karlsruhe, Karlsruhe,

76128, Germany

SO Chemistry--A European Journal (2004), 10(20), 5017-5030  
CODEN: CEUJED; ISSN: 0947-6539

PB Wiley-VCH Verlag GmbH & Co. KGaA  
DT Journal  
LA English

AB This article describes BP86/SV(P) (DFT) calcns. on a representative set of weakly coordinating anions (WCAs) of type  $[M(L)_n]^-$ , their parent neutral Lewis acids  $M(L)_n$  and their ate complexes with fluoride, i.e.,  $[FM(L)_n]^{n-1}$  ( $M = B, L = F, OTeF_5, C_6H_5, C_6F_5, C_6H_3(CF_3)_2, CF_3; M = P, As, Sb, L = F, OTeF_5; M = Al, L = OC(CF_3)_3$ ). Compds. with fluoride bridges, i.e.,  $SbnF_{5n}$  and  $[SbnF_{5n} + 1]^-$  ( $n = 2, 3, 4$ ),  $Al_2(L)_5F$  and  $[(L)_3Al-F-Al(L)_3]^-$  ( $L = OC(CF_3)_3$ ),  $(F_4C_6\{1,2-B(L)_2\}_2)$ ,  $[F_4C_6\{1,2-B(L)_2\}_2F]^-$ ,  $[F_4C_6\{1,2-B(L)_2\}_2OMe]^-$  ( $L = C_6F_5$ ) were also calculated. Based on these BP86/SV(P) and auxiliary MP2/TZVPP, G2, and CBS-Q calcns. the relative stabilities and coordinating abilities of these WCAs were established with regard to the fluoride ion affinities (FIA) of the parent Lewis acids, the ligand affinity (LA) of the WCAs, the decomposition of a given WCA in the presence of a hard ( $H^+$ , proton decomposition PD) and a soft electrophile ( $Cu^+$ , copper decomposition CuD), the position of the HOMO, the HOMO-LUMO gap, and population analyses of the anions providing partial charges for all atoms. To obtain data that is more reliable, the assessed quantities were calculated through isodesmic reactions. If parts of the calcns. could not be done isodesmically, higher levels such as MP2/TZVPP, G2, and CBS-Q were used to obtain reliable values for these reactions. Although the obtained results can not be taken as absolute, the relative ordering of the stabilities of all WCAs will undoubtedly be correct, since a single methodol. was chosen for the investigation. To include media effects the decomposition reactions of a subset of 14 WCAs with the  $SiMe_3^+$  and  $[Cp_2ZrMe]^+$  ions were also calculated in PhCl and 1,2-F2C6H4 (COSMO solvation model). We found that in most cases gas-phase calcns. and solution calcns. give comparable results for the stability of the anion. Applications of the LA and FIA that allow one to decide, on thermodyn. grounds, which WCA or Lewis acid is the most suitable for a given problem are sketched.

OSC.G 25 THERE ARE 25 CAPLUS RECORDS THAT CITE THIS RECORD (25 CITINGS)  
RE.CNT 142 THERE ARE 142 CITED REFERENCES AVAILABLE FOR THIS RECORD  
RE.CNT 142 THERE ARE 142 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 3 OF 29 CAPLUS COPYRIGHT 2009 ACS ON STN  
AN 2004:728365 CAPLUS  
DN 141:382056

TI Conductivities and electrochemical stabilities of lithium salts of polyfluoroalkoxyaluminate superweak anions  
AU Tsujioka, Shoichi; Nolan, Benjamin G.; Takase, Hironari; Fauber, Benjamin P.; Strauss, Steven H.  
CS Department of Chemistry, Colorado State University, Fort Collins, CO, 80523 USA, USA  
SO Journal of the Electrochemical Society (2004), 151(9), A1418-A1423  
CODEN: JESQAN; ISSN: 0013-4651

PB Electrochemical Society  
DT Journal  
LA English

AB Six lithium salts of tris- and tetrakis(polyfluoroalkoxy)aluminate superweak anions were studied for their potential use as battery electrolytes. Four of the six are based on the formula  $LiAl(OCR(CF_3)_2)_4$  ( $R = H, Me, CF_3, Ph$ ); the other two are  $LiAl(OCH_2CF_3)_4$  and  $LiAlF(OCPh(CF_3)_2)_3$ . The thermally stable electrolytes  $LiAl(OCH(CF_3)_2)_4$  and  $LiAl(OCPh(CF_3)_2)_4$  were not oxidized at potentials less than or equal to 5.0 V vs.  $Li^+/0$  in dimethoxyethane (DME) or in 50:50% ethylene carbonate:dimethylcarbonate (EC:DMEC). The  $LiAl(OCH(CF_3)_2)_4$  electrolyte was not reduced at 0 V vs.  $Li^+/0$  in DME. Neither  $LiAl(OCH(CF_3)_2)_4$  nor

LiAl(OC(Ph)(CF<sub>3</sub>)<sub>2</sub>)<sub>4</sub> promoted the corrosion of aluminum at 5.0 V vs. Li<sup>+</sup>/0. The electrolyte LiAl(OC(Ph)(CF<sub>3</sub>)<sub>2</sub>)<sub>4</sub> underwent efficient, reversible reductive intercalation of Li<sup>+</sup> with MCMB carbon or LiCoO<sub>2</sub> electrodes over the potential ranges 0–2 and 2.4–4.8 V, resp., vs. Li<sup>+</sup>/0, but did not react in any other way with these electrode materials. The conductivities of some of the LiAl(ORF)<sub>4</sub> electrolytes in DME or in EC:DMC were high enough for them to be considered as potential replacements for LiPF<sub>6</sub> in primary and secondary lithium batteries.

OSC.G 7 THERE ARE 7 CAPLUS RECORDS THAT CITE THIS RECORD (7 CITINGS)  
RE.CNT 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 4 OF 29 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2004:638855 CAPLUS

DN 141:324605

TI The reaction of Li[Al(OR)<sub>4</sub>] R = OC(CF<sub>3</sub>)<sub>2</sub>Ph, OC(CF<sub>3</sub>)<sub>3</sub> with NO/NO<sub>2</sub> giving NO[Al(OR)<sub>4</sub>], Li[NO<sub>3</sub>] and N<sub>2</sub>O. The synthesis of NO[Al(OR)<sub>4</sub>] from Li[Al(OR)<sub>4</sub>] and NO[SbF<sub>6</sub>] in sulfur dioxide solution

AU Decken, Andreas; Jenkins, H. Donald Brooke; Nikiforov, Grigori B.; Passmore, Jack

CS Chemistry Department, University of New Brunswick, Fredericton, NB, E3B 6E2, Can.

SO Dalton Transactions (2004), (16), 2496–2504

CODEN: DTARAF; ISSN: 1477–9226

PB Royal Society of Chemistry

DT Journal

LA English

OS CASREACT 141:324605

AB NO[Al(OC(CF<sub>3</sub>)<sub>2</sub>Ph)<sub>4</sub>] 1 and NO[Al(OC(CF<sub>3</sub>)<sub>3</sub>)<sub>4</sub>] 2 were obtained by the metathesis reaction of NO[SbF<sub>6</sub>] and the corresponding Li[Al(OR)<sub>4</sub>] salts in liquid SO<sub>2</sub> solution in .apprx.40% (1) and 85% (2) isolated yield. 1 And 2, as well as Li[NO<sub>3</sub>] and N<sub>2</sub>O, were also obtained by the reaction of an excess of mixture of (90 mol%) NO, (10 mol%) NO<sub>2</sub> with Li[Al(OR)<sub>4</sub>] followed by

extraction with SO<sub>2</sub>. The unfavorable disproportionation reaction of 2NO<sub>2</sub>(g) to [NO]<sup>+</sup>(g) and [NO<sub>3</sub>]<sup>–</sup>(g) [ΔH° = +616.2 kJ mol<sup>–1</sup>] is more than compensated by the disproportionation energy of 3NO(g) to N<sub>2</sub>O(g) and NO<sub>2</sub>(g) [ΔH° = –155.4 kJ mol<sup>–1</sup>] and the lattice energy of Li[NO<sub>3</sub>] (s) [UPOT = 862 kJ mol<sup>–1</sup>]. Evidence is presented that the reaction proceeds via a complex of [Li]<sup>+</sup> with NO, NO<sub>2</sub> (or their dimers) and N<sub>2</sub>O. NO<sub>2</sub> and Li[Al(OC(CF<sub>3</sub>)<sub>3</sub>)<sub>4</sub>] gave {NO<sub>3</sub>(NO)<sub>3</sub>}[Al(OC(CF<sub>3</sub>)<sub>3</sub>)<sub>4</sub>]<sub>2</sub>, NO[Al(OC(CF<sub>3</sub>)<sub>3</sub>)<sub>4</sub>] and (NO<sub>2</sub>)[Al(OC(CF<sub>3</sub>)<sub>3</sub>)<sub>4</sub>] products. The Al complex [Li[AlF(OC(CF<sub>3</sub>)<sub>2</sub>Ph)<sub>3</sub>]]<sub>2</sub> 3 was prepared by the thermal decomposition of Li[Al(OC(CF<sub>3</sub>)<sub>2</sub>Ph)<sub>4</sub>]. Compds. 1 and 3 were characterized by single crystal x-ray structural analyses, 1–3 by elemental analyses, NMR, IR, Raman and mass spectra. Solid 1 contains [Al(OC(CF<sub>3</sub>)<sub>2</sub>Ph)<sub>4</sub>]<sup>–</sup> and [NO]<sup>+</sup> weakly linked via donor acceptor interactions, while in the SO<sub>2</sub> solution there is an equilibrium between the associated [NO]<sup>+</sup>[Al(OC(CF<sub>3</sub>)<sub>2</sub>Ph)<sub>4</sub>]<sup>–</sup> and separated solvated ions. Solid 2 contains essentially ionic [NO]<sup>+</sup> and [Al(OC(CF<sub>3</sub>)<sub>3</sub>)<sub>4</sub>]<sup>–</sup>. Complex 3 consists of two {Li[AlF(OC(CF<sub>3</sub>)<sub>2</sub>Ph)<sub>3</sub>]} units linked via F Li contacts. Compound 1 is unstable in the SO<sub>2</sub> solution and decomp. to yield [AlF(OC(CF<sub>3</sub>)<sub>2</sub>Ph)<sub>3</sub>]<sup>–</sup>, [(PhC(CF<sub>3</sub>)<sub>2</sub>O)<sub>3</sub>Al(μ-F)Al(OC(CF<sub>3</sub>)<sub>2</sub>Ph)<sub>3</sub>]<sup>–</sup> anions as well as (NO)C<sub>6</sub>H<sub>4</sub>C(CF<sub>3</sub>)<sub>2</sub>OH, while compound 2 is stable in liquid SO<sub>2</sub>. The v(NO<sup>+</sup>) in 1 and [NO]<sup>+</sup>(toluene)[SbCl<sub>6</sub>]<sup>–</sup> are similar, implying similar basicities of [Al(OC(CF<sub>3</sub>)<sub>2</sub>Ph)<sub>4</sub>]<sup>–</sup> and toluene.

equilibrium between the associated [NO]<sup>+</sup>[Al(OC(CF<sub>3</sub>)<sub>2</sub>Ph)<sub>4</sub>]<sup>–</sup> and separated solvated ions. Solid 2 contains essentially ionic [NO]<sup>+</sup> and [Al(OC(CF<sub>3</sub>)<sub>3</sub>)<sub>4</sub>]<sup>–</sup>. Complex 3 consists of two {Li[AlF(OC(CF<sub>3</sub>)<sub>2</sub>Ph)<sub>3</sub>]} units linked via F Li contacts. Compound 1 is unstable in the SO<sub>2</sub> solution and decomp. to yield [AlF(OC(CF<sub>3</sub>)<sub>2</sub>Ph)<sub>3</sub>]<sup>–</sup>, [(PhC(CF<sub>3</sub>)<sub>2</sub>O)<sub>3</sub>Al(μ-F)Al(OC(CF<sub>3</sub>)<sub>2</sub>Ph)<sub>3</sub>]<sup>–</sup> anions as well as (NO)C<sub>6</sub>H<sub>4</sub>C(CF<sub>3</sub>)<sub>2</sub>OH, while compound 2 is stable in liquid SO<sub>2</sub>. The v(NO<sup>+</sup>) in 1 and [NO]<sup>+</sup>(toluene)[SbCl<sub>6</sub>]<sup>–</sup> are similar, implying similar basicities of [Al(OC(CF<sub>3</sub>)<sub>2</sub>Ph)<sub>4</sub>]<sup>–</sup> and toluene.

OSC.G 11 THERE ARE 11 CAPLUS RECORDS THAT CITE THIS RECORD (11 CITINGS)

RE.CNT 92 THERE ARE 92 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 5 OF 29 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2002:806300 CAPLUS

DN 138:116824  
 TI PX4+, P2X5+, and P5X2+ (X = Br, I) salts of the superweak Al(OR)4- anion  
 [R = C(CF3)3]  
 AU Gonsior, Marcin; Krossing, Ingo; Muller, Lutz; Raabe, Ines; Jansen,  
 Martin; Van Wullen, Leo  
 CS University of Karlsruhe, Karlsruhe, 76128, Germany  
 SO Chemistry--A European Journal (2002), 8(19), 4475-4492  
 CODEN: CEUJED; ISSN: 0947-6539  
 PB Wiley-VCH Verlag GmbH & Co. KGaA  
 DT Journal  
 LA English  
 OS CASREACT 138:116824  
 AB PX4+[Al(OR)4]- (X = I: 1a, X = Br: 1b) was prepared from X2, PX3, and  
 Ag[Al(OR)4] [R = C(CF3)3] in CH2Cl2 at -30° in 69-86% yield. P2X5+  
 salts were prepared from 2PX3 and Ag[Al(OR)4] in CH2Cl2 at -30°  
 yielding almost quant. P2X5+[Al(OR)4]- (X = I: 3a, X = Br: 3b). The  
 P-rich P5X2+ salts arose from the reaction of cold (-78°) mixts. of  
 PX3, P4, and Ag[Al(OR)4] giving P5X2+[Al(OR)4]- (X = I: 4a, X = Br: 4b)  
 with a C2v-sym. P5 cage. Silver salt metathesis presumably generated  
 unstable PX2+ cations from PX3 and Ag[Al(OR)4] (X = Br, I) that acted as  
 electrophilic carbene analogs and inserted into the X-X (P-P) bond of  
 X2 (PX3/P4) leading to the highly electrophilic and CH2Cl2-soluble PX4+  
 (P2X5+/P5X2+) salts. Reactions that aimed to synthesize P2I3+ from P2I4  
 and Ag[Al(OR)4] instead led to anion decomposition and the formation of  
 P2I5(CS2)+[(RO)3Al-F-Al(OR)3]- (5). All salts were characterized by  
 variable-temperature solution NMR studies (3b also by 31P MAS NMR), Raman  
 and/or IR spectroscopy as well as x-ray crystallog. (with the exception of 4a). The  
 thermochem. vols. of the P-X cations are 121 (PBr4+), 161 (PI4+), 194  
 (P2Br5+), 271 (P2I5+), and 180 Å3 (P5Br2+). The observed reactions were  
 fully accounted for by thermochem. calcns. based on (RI)-MP2/TZVPP ab  
 initio results and COSMO solvation enthalpy calcns. (CH2Cl2 solution). The  
 enthalpies of formation of the gaseous P-X cations were derived as +764  
 (PI4+), +617 (PBr4+), +749 (P2I5+), +579 (P2Br5+), +762 (P5I2+), and +705  
 kJ mol-1 (P5Br2+). The insertion of the intermediately prepared carbene  
 analog PX2+ cations into the resp. bonds were calculated, at the  
 (RI)-MP2/TZVPP level, to be exergonic at 298 K in CH2Cl2 by  
 ArG(CH2Cl2) = -133.5 (PI4+), -183.9 (PBr4+), -106.5 (P2I5+), -81.5  
 (P2Br5+), -113.2 (P5I2+), and -114.5 kJ mol-1 (P5Br2+).  
 OSC.G 38 THERE ARE 38 CAPLUS RECORDS THAT CITE THIS RECORD (38 CITINGS)  
 RE.CNT 60 THERE ARE 60 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT  
 L5 ANSWER 6 OF 29 CAPLUS COPYRIGHT 2009 ACS ON STN  
 AN 2002:608776 CAPLUS  
 DN 137:345155  
 TI A thallium coated dianion: trigonal bipyramidal [F2Al(OR)3]2- coordinated  
 to three Tl+ cations in the ion pair [Tl3F2Al(OR)3]+[Al(OR)4]- [R =  
 CH(CF3)2]  
 AU Gonsior, Marcin; Krossing, Ingo; Mitzel, Norbert  
 CS Institut fuer Anorganische Chemie, Universitaet Karlsruhe, Karlsruhe,  
 D-76128, Germany  
 SO Zeitschrift fuer Anorganische und Allgemeine Chemie (2002),  
 628(8), 1821-1830  
 CODEN: ZAACAB; ISSN: 0044-2313  
 PB Wiley-VCH Verlag GmbH  
 DT Journal  
 LA English  
 OS CASREACT 137:345155  
 AB The reproducible synthesis of the unusual ionic aluminum compound  
 [Tl3F2Al(OR)3]+[Al(OR)4]- (1) is reported. In the reaction of Li[Al(OR)4]  
 [R = C(H)(CF3)2] with TlF the initially desired Tl[Al(OR)4] only formed

with an exact 1:1 stoichiometry, while an excess of TlF led to [Tl3F2Al(OR)3]+[Al(OR)4]- (1). Addnl. the x-ray single crystal structure of the byproduct [(ROH)TlAl(OR)3(μ-F)]2 (2) was determined. Comps. 1 and 2 were characterized by x-ray single crystal structure detns. and 1 also by NMR spectroscopy and an elemental anal. In 1 the [Tl3F2Al(OR)3]+ cation forms a trigonal bipyramid with a pentacoordinate aluminum atom. Three Tl+ cations cover the [F2Al(OR)3]2- dianion core and the charge of the resulting [Tl3F2Al(OR)3]+ cation is compensated by a weakly coordinating [Al(OR)4]- anion. Compound 2 contains a centrosym. [Al(OR)3(μ-F)]22- dianion core with pentacoordinate aluminum atoms building a distorted edge sharing double trigonal bipyramid. The [Al(OR)3(μ-F)]22- dianion coordinates two [Tl(ROH)]+ cations giving the non charged mol. [(R-OH)TlAl(OR)3(μ-F)]2 (2). Based on BP86/SVP (DFT-) and lattice enthalpy calcs. a pathway of the reaction is proposed to rationalize the formation of the [M3F2Al(OR)3]+ cation upon reaction of Li[Al(OR)4] with MF for M = Tl but not for M = Cs (cf Cs+ and Tl+ have very similar ionic radii). Using a suitable Born-Haber cycle and in agreement with the experiment, the enthalpies of the reaction of two M[Al(OR)4] with two MF giving [M3F2Al(OR)3]+[Al(OR)4]- and MOR are favorable for M = Tl by 127 kJ/mol but endothermic for the formation of the hypothetical [Cs3F2Al(OR)3]+[Al(OR)4]- by 95 kJ/mol. It is suggested that in the reaction leading to 1 initially Tl[Al(OR)4] is formed, followed by an abstraction of TlOR and Al(OR)3. The latter very strong Lewis acid reacts subsequently with an excess of TlF yielding 1.

OSC.G 21 THERE ARE 21 CAPLUS RECORDS THAT CITE THIS RECORD (22 CITINGS)  
 RE.CNT 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 7 OF 29 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2002:125461 CAPLUS

DN 136:394846

TI Reactions of P4 and I2 with Ag[Al(OC(CF3)3)4]: from elusive polyphosphorus cations to subvalent P3I6+ and phosphorus rich P5I2+

AU Krossing, Ingo

CS University of Karlsruhe, Karlsruhe, 76128, Germany

SO Journal of the Chemical Society, Dalton Transactions (2002), (4), 500-512

CODEN: JCSDDAA; ISSN: 1472-7773

PB Royal Society of Chemistry

DT Journal

LA English

OS CASREACT 136:394846

AB Reactions of X2 (X = Br, I), P4 and Ag(CH2Cl2)[Al(OR)4] [R = C(CF3)3] in suitable ratios to prepare naked polyphosphorus cations were carried out and led to products which suggested these elusive cations as intermediates. At temps. >-30° to rt the initially formed cations decomposed the Al(OR)4- anion giving, in two cases, the more stable fluoride bridged (RO)3Al-F-Al(OR)3- anion. When Br2 was used as the oxidizing agent the proposed intermediate P cation (P5+) reacted with the solvent CDCl3 by double insertion of a P+ unit into the C-Cl bond giving Cl2P(CDC12)2[(RO)3Al-F-Al(OR)3] (1). When I2 was used as the oxidizer the reaction led to the marginally stable P3I6[(RO)3Al-F-Al(OR)3] (2, x-ray characterization). By using very mild conditions throughout (-80°) the primary product of the reaction of Ag(P4)2[Al(OR)4] and I2 was isolated: P5I2[Al(OR)4] (3) containing the P5I2+ cation with a hitherto unknown C2v-sym. P5 cage as structural building block. P3I6[Al(OR)4] (4) was directly synthesized in quant. yield starting from P2I4, PI3 and Ag(CH2Cl2)[Al(OR)4] in CH2Cl2 solution. P3I6+ is formed through the P2I5+ stage (3IP-NMR). P3I6+ (average: P2.33) is the first subvalent P-X cation (X = H, F, Cl, Br, I). P5I2+ (average: P0.6) is the first P-rich binary P-X cation. They are the third and fourth example of a binary P-X cation after the known PX4+ and P2X5+ cations. The observed reactions were fully



accounted for by thermochem. Born-Haber cycles based on (RI-)MP2/TZVPP ab initio, COSMO solvation and lattice enthalpy calcns. (all phases). The gaseous enthalpies of formation of several species are (in kJ mol<sup>-1</sup>): P5+ (913), P3I6+ (694), P5I2+ (792), P2I5+ (733), Ag(P4)2+ (784).

OSC.G 37 THERE ARE 37 CAPLUS RECORDS THAT CITE THIS RECORD (38 CITINGS)  
RE.CNT 45 THERE ARE 45 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 8 OF 29 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1998:321390 CAPLUS

DN 129:41181

OREF 129:8663a,8666a

TI The regioselectivity of 1,3-disubstituted allylmetal species towards electrophiles. 1-(Trimethylsilyl)alk-2-enylpotassium compounds

AU Schlosser, Manfred; Franzini, Livia

CS Institut Chimie Organique, Universite Lausanne, Lausanne, CH-1015, Switz.

SO Synthesis (1998), (5), 707-709

CODEN: SYNTBF; ISSN: 0039-7881

PB Georg Thieme Verlag

DT Journal

LA English

OS CASREACT 129:41181

AB 1-(Trimethylsilyl)alk-2-enylpotassium species are readily generated by deprotonation of (alk-2-enyl)trimethylsilanes with the superbasic mixture of BuLi and KOtMe. Like the parent compound, [1-(trimethylsilyl)allyl]potassium, they react with a variety of electrophiles preferentially, if not exclusively, at the silyl-distant terminus of the allyl moiety, thus producing branched ene silanes. The opposite regioselectivity previously observed with MeI hence appears to be an exception.

OSC.G 23 THERE ARE 23 CAPLUS RECORDS THAT CITE THIS RECORD (23 CITINGS)

L5 ANSWER 9 OF 29 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1994:107378 CAPLUS

DN 120:107378

OREF 120:18973a,18976a

TI A shortcut to  $\alpha$ -santalol

AU Schlosser, Manfred; Zhong, Guo Fu

CS Inst. Chim. Org., Univ. Lausanne, Lausanne, CH-1005, Switz.

SO Tetrahedron Letters (1993), 34(34), 5441-4

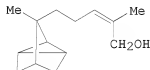
CODEN: TELEAY; ISSN: 0040-4039

DT Journal

LA English

OS CASREACT 120:107378

GI



I



II

AB  $\alpha$ -Santalol (Z-I) can be prepared from the readily available 8-bromotricyclene (II) in a one-flask procedure under perfect regio- and stereocontrol.

OSC.G 7 THERE ARE 7 CAPLUS RECORDS THAT CITE THIS RECORD (7 CITINGS)

L5 ANSWER 10 OF 29 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1989:224392 CAPLUS

DN 110:224392  
 OREF 110:37047a,37050a  
 TI Formation of peroxo complexes containing boron and carbon from boron-11, carbon-13 and fluorine-19 NMR data  
 AU Brovkin, O. V.; Chernyshov, B. N.  
 CS Inst. Khim., USSR  
 SO Zhurnal Neorganicheskoi Khimii (1989), 34(2), 299-303  
 CODEN: ZNOKAQ; ISSN: 0044-457X  
 DT Journal  
 LA Russian  
 AB The reactions of Na or K hydroxycarbonates in aqueous H<sub>2</sub>O<sub>2</sub> solns. or MHCO<sub>3</sub> (M = Na,K) with M<sub>2</sub>B<sub>3</sub>O<sub>3</sub>F<sub>4</sub>OH, M<sub>3</sub>B<sub>3</sub>O<sub>3</sub>F<sub>6</sub> or MBF<sub>3</sub>OH in aqueous H<sub>2</sub>O<sub>2</sub> solns. were studied by <sup>13</sup>C, <sup>11</sup>B and <sup>19</sup>F NMR spectroscopy. In saturated aqueous H<sub>2</sub>O<sub>2</sub>, the hydroxycarbonates form HCO<sub>2</sub>(O<sub>2</sub>)<sup>-</sup>. The addition of the fluoroborates to these solns. yielded peroxo complexes with monodentate peroxide. The formation of BF<sub>4</sub>-n(HCO<sub>4</sub>)<sup>n-</sup>, B<sub>2</sub>F<sub>2</sub>(O<sub>2</sub>)<sub>2</sub>(HCO<sub>4</sub>)<sup>22-</sup> and B<sub>2</sub>F<sub>4</sub>-n(O<sub>2</sub>)<sub>2</sub>(HCO<sub>3</sub>)<sup>n2-</sup> was observed

L5 ANSWER 11 OF 29 CAPLUS COPYRIGHT 2009 ACS on STN  
 AN 1988:562336 CAPLUS  
 DN 109:162336  
 OREF 109:26765a,26768a  
 TI Redistribution of alkali methoxyfluoroborates in anhydrous methanol  
 AU Plakhotnik, V. N.; Parkhomenko, N. G.; Kharchenko, L. V.; Sokolov, V. V.; Kopanev, V. D.  
 CS USSR  
 SO Voprosy Khimii i Khimicheskoi Tekhnologii (1987), 84, 34-8  
 CODEN: VKKCAJ; ISSN: 0321-4095  
 DT Journal  
 LA Russian  
 AB The redistribution reactions of M[BF<sub>3</sub>(OMe)] (M = Li, Na, K) were studied in MeOH by <sup>19</sup>F NMR. The redistribution of BF<sub>3</sub>(OMe)<sup>-</sup> led to BF<sub>4</sub><sup>-</sup> and hydrolysis gave BF<sub>3</sub>(OH)<sup>-</sup>. The initial rate of the processes increased with a decrease of the cation size because of its polarizing effect on the inner coordination sphere. The redistribution of K[BF(OMe)<sub>3</sub>] is faster than that of K[BF<sub>3</sub>(OMe)]. K[BF(OMe)<sub>3</sub>] is converted to K[BF<sub>3</sub>(OMe)], K[B(OMe)<sub>4</sub>] and [B<sub>2</sub>F(OMe)<sub>6</sub>]<sup>-</sup>.

L5 ANSWER 12 OF 29 CAPLUS COPYRIGHT 2009 ACS on STN  
 AN 1987:77709 CAPLUS  
 DN 106:77709  
 OREF 106:12617a,12620a  
 TI Composition and structure of aluminum fluoro complexes in aqueous alcoholic solutions  
 AU Kon'shin, V. V.; Chernyshov, B. N.; Ippolitov, E. G.  
 CS Inst. Khim., Vladivostok, USSR  
 SO Koordinatsionnaya Khimiya (1986), 12(10), 1345-50  
 CODEN: KOKHDC; ISSN: 0132-344X  
 DT Journal  
 LA Russian  
 AB Competitive solvation of fluoroaluminum complexes was studied in aqueous MeOH and aqueous EtOH solns. by <sup>19</sup>F NMR spectra. In these solns. the fluoroaluminum complexes exist only as a monofluoro complex. With an increase of alc. concentration in the solns. successive substitution of H<sub>2</sub>O by the alc. occurred. in the solvation shell of monofluoroaluminum. Twelve <sup>19</sup>F NMR signals are observed for all the theor. possible [AlF(H<sub>2</sub>O)<sub>m</sub>(ROH)<sub>5-m</sub>]<sup>2+</sup> (n = 1-5).

L5 ANSWER 13 OF 29 CAPLUS COPYRIGHT 2009 ACS on STN  
 AN 1985:588477 CAPLUS  
 DN 103:188477  
 OREF 103:30187a,30190a  
 TI Boron-11, fluorine-19 NMR of solutions of hydroxofluoroborates in acetic

and peracetic acids  
AU Shchetinina, G. P.; Brovkina, O. V.; Chernyshov, B. N.  
CS USSR  
SO Zhurnal Neorganicheskoi Khimii (1985), 30(8), 2161-3  
CODEN: ZNOKAQ; ISSN: 0044-457X  
DT Journal  
LA Russian  
AB According to 11B and 19F NMR spectra of MBF3(OH) (M = NH4, K, Na), (NH4)2B3O3F4(OH), and Na3B3O3F6 in HOAc and HOOAc indicated nucleophilic substitution of OH- groups by OAc- and OAc- groups occurred.

L5 ANSWER 14 OF 29 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1985:85235 CAPLUS

DN 102:85235

OREF 102:13301a,13304a

TI Fluoride and chloride affinities of main group oxides, fluorides, oxofluorides, and alkyls. Quantitative scales of Lewis acidities from ion cyclotron resonance halide-exchange equilibria

AU Larson, J. W.; McMahon, T. B.

CS Dep. Chem., Univ. New Brunswick, Fredericton, NB, E3B 6E2, Can.

SO Journal of the American Chemical Society (1985), 107(4), 766-73

CODEN: JACSAT; ISSN: 0002-7863

DT Journal

LA English

AB Accurate binding energies of F- and Cl- ions to a wide variety of Lewis acids including oxides, fluorides, oxofluorides, and alkyl derivs. of B, C, Si, P, As, and S were determined with ion cyclotron resonances halide-exchange equilibrium techniques. Magnitudes of Cl- and F- binding energies are discussed in terms of periodic trends, substituent effects, scales of Lewis acid hardness and softness, and empirical correlations. The limited data reveal not strong motivation for definitions of a hard-soft character of Lewis acids and bases in the gas phase. Useful new thermochem. data are derived for complex anions which are used to estimate crystal lattice energies for salts of complex Cl and F anions. Implications for new synthetic targets and potential catalytic agents are discussed.

OSC.G 72 THERE ARE 72 CAPLUS RECORDS THAT CITE THIS RECORD (72 CITINGS)

L5 ANSWER 15 OF 29 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1982:412651 CAPLUS

DN 97:12651

OREF 97:2181a,2184a

TI Complexing of fluoride ion with boromethyl ether in methanol

AU Plakhotnik, V. N.; Parkhomenko, N. G.; Gulivets, I. L.

CS Dnepropetr. Inst. Inzh. Zheleznodorozhn. Transp., Dnepropetrovsk, USSR

SO Koordinatsionnaya Khimiya (1982), 8(5), 631-5

CODEN: KOKHDC; ISSN: 0132-344X

DT Journal

LA Russian

AB The equilibrium F- + B(OMe)3 .dblharw. FB(OMe)3- was studied potentiometrically by using an F--selective electrode in the KF-B(OMe)3-MeOH system at 25 and 9°. The stability constant of FB(OMe)3- at 25° is (0.7-1.7) + 102 and at 9°, 8 + 102. The heat of reaction is -18 kcal/mol. A calorimetric study gave -20 ± 2 kcal/mol and AS = -57 entropy units.

L5 ANSWER 16 OF 29 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1981:113683 CAPLUS

DN 94:113683

OREF 94:18423a,18426a

TI Study of methoxyfluoroborates in water-methanol solutions by a fluorine-19 NMR method

AU Vasilyuk, N. S.; Chernyshov, B. N.  
 CS Inst. Khim., Sverdlovsk, USSR  
 SO Koordinatsionnaya Khimiya (1981), 7(1), 78-81  
 CODEN: KOKHDC; ISSN: 0132-344X  
 DT Journal  
 LA Russian  
 AB According to 19F NMR spectra, H3BO3 reacts with NH4HF2 in aqueous MeOH to give [BF4-n(OMe)n]- (n = 1-3). The appearance of [BF2(OMe)2]- in aqueous MeOH solns. of NH4[BF3(OH)] is the result of the stepwise dissociation of [BF3(OMe)]- with the formation of [BF(OMe)3]- and [BF2(OMe)2]-.

L5 ANSWER 17 OF 29 CAPLUS COPYRIGHT 2009 ACS on STN  
 AN 1979:65891 CAPLUS  
 DN 90:65891  
 OREF 90:10331a,10334a  
 TI Complex fluoroanions in solution. IX. Boron trifluoride-anion complexes and their disproportionation  
 AU Brownstein, S.; Latremouille, G.  
 CS Div. Chem., Natl. Res. Council, Canada, Ottawa, ON, Can.  
 SO Canadian Journal of Chemistry (1978), 56(21), 2764-7  
 CODEN: CJCHAG; ISSN: 0008-4042  
 DT Journal  
 LA English  
 AB Complex fluoroanions were prepared from BF3 and perchlorate, nitrate, nitrite, acetate, formate, azide, cyanate, thiocyanate, and thiophenolate ions. The complexes formed from the anions (X) of the strong acids, except the hydrogen halides, do not disproportionate to BF2(X)2-. Complexes of anions of weaker acids may disproportionate and/or complex a 2nd mol. of BF3. Regularities in F-B coupling consts. are tabulated.

OSC.G 8 THERE ARE 8 CAPLUS RECORDS THAT CITE THIS RECORD (8 CITINGS)

L5 ANSWER 18 OF 29 CAPLUS COPYRIGHT 2009 ACS on STN  
 AN 1978:431595 CAPLUS  
 DN 89:31595  
 OREF 89:4801a,4804a  
 TI Formic acid-aluminum trifluoride-water and formic acid-gallium trifluoride-water systems  
 AU Opalovskii, A. A.; Gudimovich, T. F.; Kutovaya, L. M.; Popov, V. P.  
 CS Odess. Gos. Univ., Odessa, USSR  
 SO Zhurnal Neorganicheskoi Khimii (1978), 23(5), 1361-6  
 CODEN: ZNOKAQ; ISSN: 0044-457X  
 DT Journal  
 LA Russian  
 AB The 15° solubility isotherms were determined and solid phase compns. were established by the Schreinemaker's method. Crystallization branches include AlF3.3H2O, AlF3.HCOOH.3H2O, AlF3.3HCOOH.3H2O, GaF3.3H2O, GaF3.HCOOH.3H2O, and GaF3.3HCOOH.3H2O.

L5 ANSWER 19 OF 29 CAPLUS COPYRIGHT 2009 ACS on STN  
 AN 1976:144050 CAPLUS  
 DN 84:144050  
 OREF 84:23343a,23346a  
 TI Synthesis and some properties of rubidium trimethoxyfluoroborate  
 AU Plakhotnik, V. N.; Parkhomenko, N. G.  
 CS Dnepropetr. Inst. Inzh. Zheleznodorozhn. Transp., Dnepropetrovsk, USSR  
 SO Izvestiya Vysshikh Uchebnykh Zavedenii, Khimiya i Khimicheskaya Tekhnologiya (1976), 19(1), 156-7  
 CODEN: IVUKAR; ISSN: 0579-2991  
 DT Journal  
 LA Russian  
 AB Rb[BF(OMe)3] (I) was prepared by the reaction of RbF and B(OMe)3 (2-fold excess) in MeOH. I is readily soluble in MeOH and dioxane, slightly soluble in

EtOH and DMF, and insol. in C<sub>6</sub>H<sub>6</sub>, CCl<sub>4</sub>, Et<sub>2</sub>O, and petroleum ether. I is easily hydrolyzed and begins to melt at 230-40°. I decomp. to B(OMe)<sub>3</sub> and RbF.

L5 ANSWER 20 OF 29 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1974:420331 CAPLUS

DN 81:20331

OREF 81:3229a,3232a

TI Synthesis and properties of cesium trimethoxyfluoroborate

AU Plakhotnik, V. N.; Parkhomenko, N. G.; Eviskov, V. V.

CS Dnepropetr. Inst. Inzh. Zheleznodorozhn. Transp., Dnepropetrovsk, USSR

SO Zhurnal Neorganicheskoi Khimii (1974), 19(5), 1260-3

CODEN: ZNOKAQ; ISSN: 0044-457X

DT Journal

LA Russian

AB CsF reacted with B(OMe)<sub>3</sub> in anhydrous MeOH to give Cs[BF(OMe)<sub>3</sub>] which was characterized by NMR and ir spectra. Cs[BF(OMe)<sub>3</sub>] decomp. thermally to CsF and B(OMe)<sub>3</sub> at 240-320°. The ir spectrum indicates the presence of a B-F bond.

L5 ANSWER 21 OF 29 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1971:60398 CAPLUS

DN 74:60398

OREF 74:9713a,9716a

TI Reaction of trimethyl borate with sodium fluoride

AU Ryss, I. G.; Parkhomenko, N. G.

CS Dnepropetr. Inst. Inzh. Zheleznodorozhn. Transp., Dnepropetrovsk, USSR

SO Zhurnal Neorganicheskoi Khimii (1970), 15(12), 3370-1

CODEN: ZNOKAQ; ISSN: 0044-457X

DT Journal

LA Russian

AB At 24°, the reaction of NaF with B(OMe)<sub>3</sub> in MeOH solution gave a small yield of a solid, which contained mainly NaF and a very small concentration of optically anisotropic crystals. These crystals are probably Na[BF(OMe)<sub>3</sub>]. Chemical anal. revealed that the solid product contained a Na/F/B/OMe ratio of 1:1.01:0.155:0.63.

L5 ANSWER 22 OF 29 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1970:106640 CAPLUS

DN 72:106640

OREF 72:19285a,19288a

TI Preparation of stable antimony(V)-nitrogen compounds

AU Hass, Dieter; Cech, Dieter

CS Sekt. Chem., Humboldt Univ. Berlin, Berlin, Fed. Rep. Ger.

SO Zeitschrift fuer Chemie (1970), 10(2), 75-6

CODEN: ZECEAL; ISSN: 0044-2402

DT Journal

LA German

AB SbBr<sub>2</sub>(OEt)<sub>3</sub> reacts with NH<sub>2</sub>Pr in Et<sub>2</sub>O to give Sb(NHPr)<sub>2</sub>(OEt)<sub>3</sub> (I) which splits off PrNH<sub>2</sub> in vacuum to give Sb(NHPr)<sub>2</sub>(OEt)<sub>3</sub>. Sb(NHCH<sub>2</sub>Ph)(OEt)<sub>3</sub> was similarly prepared which splits off EtOH in vacuum to give Sb(NHCH<sub>2</sub>Ph)(NCH<sub>2</sub>Ph)(OEt)<sub>2</sub>. I was also obtained from Sb(OEt)<sub>5</sub> and excess amine. I was treated with HCl to give SbCl<sub>2</sub>(OEt)<sub>3</sub> and PrNH<sub>2</sub>.HCl. Fluorination of I with AsF<sub>3</sub> gave SbF<sub>2</sub>(OEt)<sub>3</sub> and AsF(NPr). Sb(OEt)<sub>5</sub> and HF gave SbF<sub>2</sub>(OEt)<sub>3</sub>. SbF<sub>2</sub>(OEt)<sub>3</sub> was treated with PrNH<sub>2</sub> to give SbF<sub>2</sub>(OEt)<sub>2</sub>NHPr which splits off EtOH in vacuum to give a cyclic compound [SbF<sub>2</sub>(OEt)NPr]<sub>n</sub>. SbF<sub>2</sub>(OEt)<sub>3</sub> reacted with PhNH<sub>2</sub> to give SbF<sub>2</sub>(OEt)<sub>2</sub>NHPh.

L5 ANSWER 23 OF 29 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1970:42640 CAPLUS

DN 72:42640

OREF 72:7799a,7802a

TI Aminolysis of fluoroarsenic(V) alcoholates  
AU Hass, Dieter; Cech, Ingrid  
CS Sek. Chem., Humboldt-Univ. Berlin, Berlin, Fed. Rep. Ger.  
SO Zeitschrift fuer Chemie (1969), 9(11), 432  
CODEN: ZECEAL; ISSN: 0044-2402  
DT Journal  
LA German  
GI For diagram(s), see printed CA Issue.  
AB As(OMe)4F and PrNH2 was refluxed to give As(OMe)3(NHPr)F which split off MeOH in vacuum to give As(OMe)2(NPr)F (I). The mol. weight determination indicated I to be dimeric with 2 bridging NPr groups. I was also formed by the reaction of As(OMe)3F2 and excess PrNH2. As(OMe)4F and RNH2, such as PhCH2NH2, was refluxed to give dimeric II.

L5 ANSWER 24 OF 29 CAPLUS COPYRIGHT 2009 ACS on STN  
AN 1970:18060 CAPLUS  
DN 72:18060  
OREF 72:3287a,3290a

TI Acidolysis of orthoarsenic acid esters  
AU Hass, Dieter; Cech, Ingrid  
CS Humboldt-Univ., Berlin, Fed. Rep. Ger.  
SO Zeitschrift fuer Chemie (1969), 9(10), 384-5  
CODEN: ZECEAL; ISSN: 0044-2402  
DT Journal  
LA German  
AB As(OMe)5 reacted with equimolar amts. of HF to give FAs(OMe)4, which was stable in vacuo <30°. ClAs(OMe)4, prepared similarly, was very unstable and decomposed to OAs(OMe)3 and MeCl. As(OMe)5 reacted with 2 moles HF to give unstable FeAs(OMe)3. The reaction of As(OMe)5 with >1 mole HCl led to the reduction of As(V) to As(III).

L5 ANSWER 25 OF 29 CAPLUS COPYRIGHT 2009 ACS on STN  
AN 1968:464182 CAPLUS  
DN 69:64182  
OREF 69:11987a,11990a  
TI Fluoromethoxyborates  
AU Kolditz, Lothar; Lung, Cheng-Shou  
CS Humboldt-Univ., Berlin, Fed. Rep. Ger.  
SO Zeitschrift fuer Anorganische und Allgemeine Chemie (1968), 360(1-2), 25-30  
CODEN: ZAACAB; ISSN: 0044-2313  
DT Journal  
LA German

AB M[BFn(OMe)4-n] (I), M = Na or K, n = 2 or 3, were prepared (80-95% yield) in Et2O at -40°; I (n = 1) was prepared at 54°. I (n = 1) were least thermally stable and produced the fluoride and boric acid ester on decomposition; I, n > 1, produced fluoride, tetrafluoroborate, and boric acid ester on decomposition X-ray diffraction line diagrams of the I compds. are shown.

L5 ANSWER 26 OF 29 CAPLUS COPYRIGHT 2009 ACS on STN  
AN 1968:118887 CAPLUS  
DN 68:118887  
OREF 68:22923a  
TI Synthesis and properties of potassium trimethoxyfluoroborate K[BF(OCH3)3]  
AU Ryss, I. G.; Plakhotnik, V. N.  
CS Dnepropetrovsk. Inst. Inzh. Zheleznodorozh. Transp., Dnepropetrovsk, USSR  
SO Doklady Akademii Nauk SSSR (1968), 178(5), 1102-5  
CODEN: DANKAS; ISSN: 0002-3264  
DT Journal  
LA Russian

AB B(OMe)<sub>3</sub> (0.0854 mole) was added to a mixture of 0.084 mole KF with 20 ml. MeOH, cooled to 0°. The resulting viscous solution was filtered and the filtrate treated with 80 ml. anhydrous Et<sub>2</sub>O to yield 8.75 g. (67%) K[BF(OMe)<sub>3</sub>] (I). In aqueous solns. I is hydrolyzed to H<sub>3</sub>BO<sub>3</sub>, F<sup>-</sup>, and MeOH. At >154°, I decompose forming KF and B(OMe)<sub>3</sub>.

OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L5 ANSWER 27 OF 29 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1968:86792 CAPLUS

DN 68:86792

OREF 68:16699a,16702a

TI Fluorine-containing compounds of Group V elements. XXI. Composition of fluoroarsenic acid esters and preparation of fluoroalkoxo-, hexaalkoxo-, and dialkoxoarsenates

AU Kolditz, Lothar; Riesel, Gisela

CS Humboldt-Univ., Berlin, Fed. Rep. Ger.

SO Zeitschrift fuer Anorganische und Allgemeine Chemie (1967), 355(3-4), 170-5

CODEN: ZAACAB; ISSN: 0044-2313

DT Journal

LA German

AB Under strong stirring and at 0°, AsF<sub>3</sub> was added dropwise to O:As(OMe)<sub>3</sub> in a mole ratio of 2:1 to give an oligomer of fluoroarsenic acid Et ester (I). The oligomer of fluoroarsenic acid Me ester (II) was similarly prepared. Treatment of As(OMe)<sub>5</sub> with CsF in a mole ratio of 1:1 in MeOH at 0° gave Cs[AsF(OMe)<sub>5</sub>]. The reaction of O:As(OMe)<sub>3</sub> with CsF in a mole ratio of 1:3 in MeOH gave Cs[AsF<sub>3</sub>(OMe)<sub>3</sub>]. Similarly prepared was Cs[AsF<sub>3</sub>(OMe)<sub>3</sub>]. The reaction of I in EtOH with MF (M = K, Cs) gave M[AsF<sub>5</sub>OEt]. Similarly prepared were K[AsF<sub>4</sub>(OMe)<sub>2</sub>] and Cs[AsF<sub>5</sub>OMe]. Treatment of O:As(OMe)<sub>3</sub> in MeOH with Li in MeOH at room temperature in a mole ratio of 1:1 gave Li[As(OMe)<sub>6</sub>] and LiAsO<sub>2</sub>(OMe)<sub>2</sub>. The thermal decomposition of Li[As(OMe)<sub>6</sub>] at 180° gave As(OMe)<sub>5</sub>.

L5 ANSWER 28 OF 29 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1963:447906 CAPLUS

DN 59:47906

OREF 59:8598c-d

TI Halogen derivatives of salts of organic acids

IN Marks, Burton S.; Schoepfle, Blaine O.

PA Hooker Chemical Corp.

SO 3 pp.; Continuation-in-part of U.S. 2,996,528 (CA 56, 4623d)

DT Patent

LA Unavailable

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3080406		19630305	US 1960-75927	19601215 <--
PRAI	US		19601215		

AB Compds. of the general formula (RCO<sub>2</sub>)<sub>3</sub>SbX<sub>2</sub> are prepared by adding the stoichiometric amount of F, Cl, or Br to (RCO<sub>2</sub>)<sub>3</sub>Sb; R is an alkyl radical of 3 to 12 carbon atoms, an aryl radical, or an aralkyl radical. Thus, 0.02 mole of Br was added to 0.02 mole of Sb caprylate in CCl<sub>4</sub>. The Br color was dissipated rapidly on addition of 80%, slowly on standing on addition of the last 20%. The solvent was removed to give an orange oil, which could not be purified further. The salts are used as fire-retarding additives in polyesters.

OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L5 ANSWER 29 OF 29 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1961:129718 CAPLUS

DN 55:129718

OREF 55:24363c-g

TI Fluorine-containing compounds of Group V elements. XIII. Monomeric fluoroarsenic acid esters

AU Kolditz, Lothar; Hass, Dieter

CS Friedrich Schiller Univ., Jena, Germany

SO Zeitschrift fuer Anorganische und Allgemeine Chemie (1961), 307, 290-303

CODEN: ZAACAB; ISSN: 0044-2313

DT Journal

LA Unavailable

AB cf. CA 54, 8396g. Esters of mono- and difluoroarsenic acids were prepared from esters of arsenic acid and HF or AsF<sub>3</sub> by one or more of the following syntheses: 2HF + OAs(OR)<sub>3</sub> → F<sub>2</sub>AsO(OR) + 2ROH; HF + OAs(OR)<sub>3</sub> → FAsO(OR)<sub>2</sub> + ROH; OAs(OR)<sub>3</sub> + F<sub>2</sub>AsO(OR) → ROH 2FAsO(OR)<sub>2</sub>; OAs(OR)<sub>3</sub> + AsF<sub>3</sub> → ROH F<sub>2</sub>AsOR + FAsO(OR)<sub>2</sub>; OAs(OR)<sub>3</sub> + 2AsF<sub>3</sub> → ROH 2F<sub>2</sub>AsOR + F<sub>2</sub>AsO(OR). Mixed esters were prepared by starting with mixed esters of arsenic acid or, in syntheses requiring ROH, a different alc. from that involved in the arsenic acid ester. The 1 mol. ROH always associated with 1 mol. of ester could not be removed without decomposing the ester. The probable structures, FAs(OH)(OEt)<sub>3</sub> and F<sub>2</sub>As(OH)(OEt)<sub>2</sub>, were supported by infrared spectroscopy. The following were isolated: FAs(OH)(OMe)<sub>3</sub>, b<sub>3</sub>-5 40-3°; FAs(OH)(OMe)<sub>2</sub>(OEt), b<sub>3</sub>-5 47-9°; FAs(OH)(OMe)(OEt)<sub>2</sub>, b<sub>3</sub>-5 54-6°; FAs(OH)(OEt)<sub>3</sub>, b<sub>3</sub>-5 55-8°; FAs(OH)(OPr)<sub>3</sub>, b<sub>3</sub>-5 78-81°; F<sub>2</sub>As(OH)(OMe)(OEt), m. 66-8°; F<sub>2</sub>As(OH)(OEt)<sub>2</sub>, m. 40-2°; F<sub>2</sub>AsOMe, b. 65°; F<sub>2</sub>AsOEt, b. 75°; F<sub>2</sub>AsOPr, b. 95°; F<sub>2</sub>AsOBu, b. 107°. Even at relatively low concns. in nonpolar solvents the fluoesters condense, probably by H bonding between OH groups and F atoms. Conductivity

data for FAs(OH)(OMe)<sub>3</sub>, FAs(OH)(OMe)<sub>2</sub>(OEt), FAs(OH)(OEt)<sub>3</sub>, FAs(OH)(OPr)<sub>3</sub>, F<sub>2</sub>As(OH)(OMe)(OEt), and F<sub>2</sub>As(OH)(OEt)<sub>2</sub> show that these esters are dissociated in MeCN at 20°; the order of conductivity is Me > Et > Pr. Values for the mixed esters fall between those for the Me and Et compds. Mol.-weight detns. in MeCN show that the dissociation is 2FAs(OH)(OR)<sub>3</sub> → As(OH)(OR)<sub>3</sub> + As(OH)(OR)<sub>3</sub>F<sub>2</sub>-. Transport expts. for FAs(OH)(OEt)<sub>3</sub> and F<sub>2</sub>As(OH)(OEt)<sub>2</sub> in MeCN confirm the F- transfer.

=>

---Logging off of SIN---

=>

Executing the logoff script...

=> LOG Y

=>

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

121.46

307.56

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE

TOTAL

ENTRY

SESSION

CA SUBSCRIBER PRICE

-23.78

-23.78

STN INTERNATIONAL LOGOFF AT 19:48:43 ON 10 DEC 2009



FILE 'HOME' ENTERED AT 12:33:15 ON 11 DEC 2009

=> fil reg

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.22

0.22

FILE 'REGISTRY' ENTERED AT 12:33:48 ON 11 DEC 2009

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<http://www.cas.org/support/stngen/stndoc/properties.html>

=>

Uploading C:\Program Files\STNEXP\Queries\580974-1.str

chain nodes :

2 3 4 5 7 8 10

chain bonds :

2-5 2-3 2-4 3-8 4-10 5-7

exact/norm bonds :

2-5 2-3 2-4 3-8 4-10 5-7

G1:B,Al,Ga,In,P

G2:Cb,Cy,Hy,Ak

Match level :

2:CLASS 3:CLASS 4:CLASS 5:CLASS 7:CLASS 8:CLASS 10:CLASS

L1 STRUCTURE UPLOADED

=> d his

(FILE 'HOME' ENTERED AT 12:33:15 ON 11 DEC 2009)

FILE 'REGISTRY' ENTERED AT 12:33:48 ON 11 DEC 2009

L1 STRUCTURE UPLOADED

=> d l1

L1 HAS NO ANSWERS

L1 STR



G1 B,Al,Ga,In,P

G2 Cb,Cy,Hy,Ak

Structure attributes must be viewed using STN Express query preparation.

=> s l1

SAMPLE SEARCH INITIATED 12:34:17 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 43381 TO ITERATE

4.6% PROCESSED 2000 ITERATIONS

50 ANSWERS

INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*

BATCH \*\*COMPLETE\*\*

PROJECTED ITERATIONS: 855171 TO 880069

PROJECTED ANSWERS: 87476 TO 95590

L2 50 SEA SSS SAM L1

=> s l1 full

FULL SEARCH INITIATED 12:34:28 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 866908 TO ITERATE

100.0% PROCESSED 866908 ITERATIONS ( 2 INCOMPLETE)

97771 ANSWERS

SEARCH TIME: 00.00.11

L3 97771 SEA SSS FUL L1

=> fil caplus

COST IN U.S. DOLLARS

SINCE FILE

ENTRY

TOTAL

SESSION

FULL ESTIMATED COST

187.32

187.54

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FILE COVERS 1907 - 11 Dec 2009 VOL 151 ISS 25  
FILE LAST UPDATED: 10 Dec 2009 (20091210/ED)  
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Oct 2009  
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Aug 2009

CAPLUS now includes complete International Patent Classification (IPC) reclassification data for the third quarter of 2009.

CAS Information Use Policies apply and are available at:

<http://www.cas.org/legal/infopolicy.html>

This file contains CAS Registry Numbers for easy and accurate substance identification.

```
=> s l3
L4      131193 L3

=> s l4 and py<=2004
      25161918 PY<=2004
L5      110765 L4 AND PY<=2004

=> s l5 and partially fluorinated
      369980 PARTIALLY
      43183 FLUORINATED
      1316 PARTIALLY FLUORINATED
      (PARTIALLY(W)FLUORINATED)
L6      10 L5 AND PARTIALLY FLUORINATED

=> d 1-10 bib abs

L6 ANSWER 1 OF 10 CAPLUS COPYRIGHT 2009 ACS on STN
AN 2002:582016 CAPLUS
DN 137:263392
TI Controlling the Energy Levels of Conducting Polymers. Hydrogen versus
   Fluorine in Poly(dialkylterphenylenevinylene)s
AU Krebs, Frederik C.; Jorgensen, Mikkel
CS Danish Polymer Centre, Riso National Laboratory, Roskilde, DK-4000, Den.
SC Macromolecules (2002), 35(19), 7200-7206
   CODEN: MAMOBX; ISSN: 0024-9297
PB American Chemical Society
DT Journal
LA English
AB The control of the position of the energy levels in conducting polymers
```

through fluorine substitution is demonstrated. The synthesis of four different monomers and polymers of the poly(terphenylenevinylene) type is presented. The synthetic procedure started with 4-bromo-2,5-diethylphenylboronic acid (1) coupled by the Suzuki method with 4-bromobenzaldehyde to give 4'-bromo-2',5'-diethyl-4-formylbiphenyl (2) that was again coupled by the Suzuki method with 4-diethylphosphonylmethylphenylboronic acid and 4-cyanomethylphenylboronic acid to give the monomers 4''-diethylphosphonylmethyl-2',5'-diethyl-4-formylterphenyl (3) and 4''-cyanomethyl-2',5'-diethyl-4-formylterphenyl (4). The partially fluorinated analogous monomers were prepared similarly employing 2,5-difluoro-3,6-diperfluorooctyl-1,4-dibromobenzene. This gave 4-bromo-2,5-difluoro-3,6-diperfluorooctyl-4'-diethylphosphonylmethylbiphenyl (5) and 4-bromo-2,5-difluoro-3,6-diperfluorooctyl-4'-cyanomethylbiphenyl (6). Compds. 5 and 6 were both subjected to Suzuki couplings with 4-formylphenylboronic acid to give resp. 4-formyl-2',5'-difluoro-3',6'-diperfluorooctyl-4''-diethylphosphonylmethylterphenyl (7) and 4-formyl-2',5'-difluoro-3',6'-diperfluorooctyl-4''-cyanomethylterphenyl (8). The monomers 3, 4, 7, and 8 were polymerized to give the polymers poly(2',5'-diethyl-4,4''-terphenylenevinylene) (9), poly(2',5'-diethyl-4,4''-terphenylenevinylene) (10), poly(2',5'-difluoro-3',6'-diperfluorooctyl-4,4''-terphenylenevinylene) (11), and poly(2',5'-difluoro-3',6'-diperfluorooctyl-4,4''-terphenylenevinylene) (12). Thin films of the polymers on polycryst. gold substrates were subjected to UPS, and the ionization potentials were determined to be 4.85, 4.60, 4.75, and 5.95 eV for 9, 10, 11, and 12 resp. The positions of the highest occupied energy levels were determined to be 1.45, 2.65, 2.25, and 3.05 eV lower than that of gold for 9, 10, 11, and 12, resp. Fluorine and cyano substitution thus allows for an energy level tuning by as much as 1.6 eV.

OSC.G 26 THERE ARE 26 CAPLUS RECORDS THAT CITE THIS RECORD (26 CITINGS)  
 RE.CNT 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 2 OF 10 CAPLUS COPYRIGHT 2009 ACS on STN  
 AN 2002:172022 CAPLUS  
 DN 136:224305  
 TI Partially fluorinated liquid crystal material  
 IN Wand, Michael; Gough, Neil; Chen, Xin Hua  
 PA Displaytech, Inc., USA  
 SO PCT Int. Appl., 91 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002018514	A1	20020307	WO 2001-US27182	20010831 <--
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GO, GW, ML, MR, NE, SN, TD, TG				
	US 20030017278	A1	20030123	US 2001-854181	20010511 <--
	US 7083832	B2	20060801		
	AU 2001085364	A	20020313	AU 2001-85364	20010831 <--
PRAI	US 2000-229892P	P	20000901		
	US 2001-854181	A	20010511		

WO 2001-US27182 W 20010831

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

OS MARPAT 136:224305

AB The invention provides LC comps. that exhibit V-shaped switching when aligned in an analog device configuration and exhibit bistable switching when aligned in a bookshelf-type device configuration. The invention more specifically provides LC comps. of (R = fluorinated alkyl, ether; A, B, C = 5-6 aromatic rings each substituted with 1-4 fluorines and CH can be substituted with N, O, S; d = 0, 1; D = COO, OOC, CH<sub>2</sub>CH<sub>2</sub>, double bond, triple bond; Y = Cl-6 alkyl, fluorinated alkyl; R1 = nonchiral tail alkyl with CH<sub>2</sub> group replaced by O, S, etc.) which exhibit bistable switching as well as V-shaped switching when aligned in appropriate device configurations. The invention also provides methods of using the comps. of the invention in making LC comps. and electrooptical devices comprising an aligned layer of the comps. of this invention.

OSC.G 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 3 OF 10 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2000:811156 CAPLUS

DN 134:72145

TI Stress Optical Behavior of Partially Fluorinated  
Aliphatic Polyesters

AU Reiss-Nunes, Regina C.; Riande, Evaristo; Guzman, Julio; Chavez, Nelson A.

CS Instituto de Ciencia y Tecnologia de Polimeros, CSIC, Madrid, 28006, Spain

SO Macromolecules (2000), 33(25), 9464-9467

CODEN: MAMOBX; ISSN: 0024-9297

PB American Chemical Society

DT Journal

LA English

AB Thermoelastic networks were prepared by end-linking hydroxyl-terminated poly(neopentyl glycol hexafluoroglutarate) using tris(p-isocyanate phenyl) thiophosphate as crosslinking agent. The plot of birefringence vs. stress exhibits neg. deviations from linearity at elongation ratios larger than 1.9. The value of the optical configuration parameter  $\Delta\alpha$  is 2.98 Å at 5 °C. Theor. calcns. carried out using the rotational isomeric state model give for this parameter the value of 2.24 Å, in fair agreement with the exptl. results. The cause of the strong discrepancies between the theor. and exptl. results observed for the optical configuration parameter of polyesters containing Ph groups in the acid residue is discussed.

OSC.G 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)

RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 4 OF 10 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1999:819077 CAPLUS

DN 132:51027

TI Peroxide-curable fluoroelastomers and preparation thereof for seals having improved mechanical properties, compression set and mold-release properties

IN Apostolo, Marco; Albano, Margherita

PA Ausimont S.P.A., Italy

SO Eur. Pat. Appl., 15 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 967248	A1	19991229	EP 1999-111563	19990615 <--

EP 967248 B1 20040825

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
IE, SI, LT, LV, FI, RO

IT 1301780 B1 20000707 IT 1998-MI1429 19980623 <--

ES 2226237 T3 20050316 ES 1999-111563 19990615

KR 2000006329 A 20000125 KR 1999-23371 19990621 <--

JP 2000034381 A 20000202 JP 1999-174770 19990621 <--

JP 4219492 B2 20090204

BR 9907309 A 20001031 BR 1999-7309 19990621 <--

US 6323283 B1 20011127 US 1999-334562 19990621 <--

PRAI IT 1998-MI1429 A 19980623

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

OS MARPAT 132:51027

AB Curable fluoroelastomers containing diolefin units are formed from (a) 20-70 weight% of a fluoroelastomer having Mooney viscosity, ML(1+10) at 121° (ASTM D 1646) >60 and containing 0.01-3 weight% iodine; (b) 0-70 weight% of a fluoroelastomer [ML(1+10) 20-60] containing 0.2-5 weight% iodine; (c) 5-60 weight%

of a fluoroelastomer [ML(1+10) 1-20] containing >0.3 weight% iodine, and R1R2C:CR3ZCR4:CR5R6, where R1-R6 are independently H or C1-5 alkyl; Z is a linear or branched C1-18 (cyclo)alkylene, optionally containing oxygen atoms, preferably at least partially fluorinated, or (per)fluoropolyoxyalkylene. Thus, vinylidene fluoride (I) 60, perfluoromethyl vinyl ether (II) 34, and tetrafluoroethylene (III) 6 mol% were added to an aqueous perfluoropolyoxyalkylene microemulsion prepared from 32.34 mL CF3O[CF2CF(CF3)O]n(CF2O)mCF2COOH (n/m = 10, average mol. weight 600)

and

CF3O[CF2CF(CF3)O]n(CF2O)mCF3 (n/m = 20, average mol. weight 450) at 85° to 30 bar pressure, g ammonium persulfate initiator, 56.3 g 1,6-diiodoperfluorohexane chain-transfer agent, and 27.8 g CH2:CH(CF2)6CH:CH2 (IV) were added incrementally with addition of a 75:17:8 M I-II-III mixture to maintain the pressure at 30 bar, giving, after 135 min, a latex of 78.5:17.5:4 M I-II-III copolymer containing IV units and having ML(1+10) 44. Two similar copolymer latexes prepared with different ams. of chain-transfer agent and having ML(1+10) 94 and 7, were cocoagulated (40 and 20 weight%, resp.,) with 40 weight% of the above latex, giving overall ML(1+10) 50. A cured mixture of the cocoagulated latexes 100, Luperco 101XL 2, Drimix TAIC 4.5, ZnO 4, Akrochem blue 602C 0.3, BaSO4 35, and Tremin 283-600EST 35 parts showed modulus at 100% 6.0 MPa, stress at break 12.0 MPa, elongation at break 330%, Shore A hardness 76, and compression set of O-ring (70 h at 200°) 23%, compared with 5.2, 8.0, 249, 72, and 29, resp., using a single I-II-III-IV copolymer latex having ML(1+10) 48.

OSC.G 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 5 OF 10 CAPLUS COPYRIGHT 2009 ACS ON STN

AN 1998:640687 CAPLUS

DN 129:309888

OREF 129:63079a,63082a

TI Intercalated compounds of fluorinated graphite with tributyl phosphate

AU Paasonen, V. M.; Nazarov, A. S.

CS Inst. Neorg. Khim., SO RAN, Novosibirsk, Russia

SO Zhurnal Neorganicheskoi Khimii (1998), 43(8), 1280-1281

CODEN: ZNOKAQ; ISSN: 0044-457X

PB MAIK Nauka

DT Journal

LA Russian

AB The existence of relatively stable (at room temperature) stage 1 intercalation compds. of partially fluorinated graphite with Bu3PO4 was established.

OSC.G 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

L6 ANSWER 6 OF 10 CAPLUS COPYRIGHT 2009 ACS on STN  
 AN 1994:659462 CAPLUS  
 DN 121:259462  
 OREF 121:47287a,47290a  
 TI Lubricants and magnetic recording media using the lubricants  
 IN Kondo, Hirofumi; Uchiyumi, Toshiharu; Kojika, Yukihiko  
 PA Sony Corp., Japan  
 SO Jpn. Kokai Tokkyo Koho, 37 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 06145687	A	19940527	JP 1992-321478	19921106 <--
	US 5431833	A	19950711	US 1993-147549	19931105 <--
PRAI	JP 1992-321478	A	19921106		

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

OS MARPAT 121:259462  
 AB Lubricants for coating on magnetic recording media comprise ester compds. of perfluoropolyethers having terminal OH- or COOH groups and long-chain alkyl carboxylic acids or alcs. and 0.01-100 mol (vs. esters) long-chain alkyl amines. Long-chain alkyl groups of the carboxylic acids or alcs. are partially fluorinated, preferably, perfluorinated alkyl groups. The lubricants can further contain  $\geq 1$  of additives selected from phosphoric acid esters, phosphorous acid esters and long-chain carboxylic acid esters.

OSC.G 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD (4 CITINGS)

L6 ANSWER 7 OF 10 CAPLUS COPYRIGHT 2009 ACS on STN  
 AN 1990:477669 CAPLUS  
 DN 113:77669  
 OREF 113:13135a,13138a  
 TI Reduction-olefination of esters: a new and efficient synthesis of  $\alpha$ -fluoro  $\alpha,\beta$ -unsaturated esters  
 AU Thenappan, Alagappan; Burton, Donald J.  
 CS Dep. Chem., Univ. Iowa, Iowa City, IA, 52242, USA  
 SO Journal of Organic Chemistry (1990), 55(15), 4639-42  
 CODEN: JOCEAH; ISSN: 0022-3263

DT Journal  
 LA English  
 OS CASREACT 113:77669  
 AB A reduction-olefination sequence was used to convert esters to  $\alpha$ -fluoro  $\alpha,\beta$ -unsatd. esters. Esters are reduced with Dibal to aldehydes, which react in situ with [(EtO)2P(O)CFOOEt]- Li+ to form the title compds. in good yields with high stereoselectivity. The reaction is applicable to aliphatic, aromatic, cyclic, unsatd., perfluorinated, and partially fluorinated esters. The E/Z ratio of unsatd. esters formed in the reaction varies with the cations present in the reaction mixture. Solvents have very little influence on stereochem. The sequential transformation of BzOBu to (E)-PhCO:CFCOOEt and then to (E,E)-PhCH:CFCH:CFCOOEt illustrates the scope of this methodol., which introduces an F atom adjacent to an ester functionality with concomitant elongation of the chain by 2 C atoms.

OSC.G 48 THERE ARE 48 CAPLUS RECORDS THAT CITE THIS RECORD (48 CITINGS)

L6 ANSWER 8 OF 10 CAPLUS COPYRIGHT 2009 ACS on STN  
 AN 1976:4581 CAPLUS  
 DN 84:4581  
 OREF 84:773a,776a  
 TI Synthesis of partially fluorinated phosphoric diaryl

esters and dialkyl esters and their potential application as additives and/or base oils

AU Lindinger, H.; Fanghaenel, L.  
 CS Inst. Flugtreib-Schmierst., Dtsch. Forsch.- und Versuchsanst. Luft- und Raumfahrt e.V., Munich, Fed. Rep. Ger.  
 SO Dtsch. Luft- Raumfahrt, Forschungsber. (1974), DLR-FB 74-69, 35 pp.  
 CODEN: DLRFA8

DT Report  
 LA German  
 AB POC13 reacted with ROH, and R1OH, to give 8 (RO)(R1O)PC10 (I; R = Ph, R1 = 3-MeOC6H4; R = Ph, 2-, 3- or 4-MeOC6H4, 2-ClC6H4, 4,2-MeClC6H3, or 1-naphthyl, R1 = 3-F3CC6H4), or it reacted with 2 moles phenol to give I (R = R1 = Ph, 2-ClC6H4, 2- or 4-MeC6H4, or 2,4-MeClC6H3). I then reacted with R2OH to give 18 (RO)(R1O)(R2O)PO (II; R and R1 same as in I, R2 = CF3CH2, n-C3F7CH2, or H(CF2)nCH2, where n = 6, 8, or 10). II were evaluated as lubricants and as lubricant additives (to BuCH2CH2CH2O2C(CH2)8CO2CH2CH2EtBu).

L6 ANSWER 9 OF 10 CAPLUS COPYRIGHT 2009 ACS on STN  
 AN 1974:449794 CAPLUS  
 DN 81:49794  
 OREF 81:7955a,7958a  
 TI Rotational isomerism in partially fluorinated carbonyl(acetyl)cobalt complexes  
 AU Lindner, Ekkehard; Zipper, Michael  
 CS Univ. Tuebingen, Tuebingen, Fed. Rep. Ger.  
 SO Chemische Berichte (1974), 107(5), 1444-55  
 CODEN: CHBEAM; ISSN: 0009-2940

DT Journal  
 LA German  
 AB (XFCHCO)20 (X = H and F) reacted with Na[Co(CO)4] or Na[Co(CO)3P(OPh)3] to give XFCHCOCo(CO)4 or XFCHCOCo(CO)3P(OPh)3 (I), resp., which were decarbonylated at 0-70° to give XFCHCo(CO)4 or XFCHCo(CO)3P(OPh)3, resp. I (X = H) and the known FCH2COCo(CO)3PPh3 were present as rotational isomers at -100 to +80°. Theor. considerations showed that a hindered rotation about the C-C bond is preferred to that about the Co-Cacyl bond. On the basis of the ir spectra all the acetyl and methyl complexes possess pseudo-C3v symmetry. The mass and 1H-NMR spectra are reported.

OSC.G 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)

L6 ANSWER 10 OF 10 CAPLUS COPYRIGHT 2009 ACS on STN  
 AN 1972:556976 CAPLUS  
 DN 77:156976  
 OREF 77:25767a,25770a  
 TI Synergic solvent extraction of lanthanides with mixtures of aliphatic fluorinated β-diketones and organophosphorus donors  
 AU Mitchell, James W.; Banks, Charles V.  
 CS Inst. At. Res., Iowa State Univ., Ames, IA, USA  
 SO Talanta (1972), 19(10), 1157-69  
 CODEN: TLNTA2; ISSN: 0039-9140

DT Journal  
 LA English  
 AB The extraction of lanthanides from an aqueous acetate-chloride medium into cyclohexane solns. of trifluoroacetyl-acetone, hexafluoroacetylacetone, 6,6,7,7,8,8,8-heptafluoro-2,2-dimethyl-3,5-octanedione and (BuO)3PO was studied. The extraction properties of other fluorinated aliphatic β-diketones and fluoro-organophosphates were also investigated. The efficiency of the extraction of the lanthanides, the composition of the complexes transferred to the organic phase and the extraction and stability consts. for the



synergic reactions were determined Synergic extraction, as a technique for the preparation of lanthanide species, was evaluated for compatibility with subsequent gas chromatog. The lanthanides were rapidly and quant. transferred into organic phases containing mixts. of fluorinated aliphatic  $\beta$ -diketones and  $(\text{BuO})_3\text{PO}$ . The resulting mixed complexes that contained fully fluorinated  $\beta$ -diketones had a distinct stoichiometry and were thermodynamically more stable than similar mixed complexes of partially fluorinated  $\beta$ -diketones. These properties of the synergic systems allow precise control of the formation of anhydrous complexes in the organic phase and are compatible with the use of these systems for gas chromatog.

OSC.G 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD (4 CITINGS)

=> s 15 and completely fluorinated  
 422987 COMPLETELY  
 43183 FLUORINATED  
 136 COMPLETELY FLUORINATED  
 (COMPLETELY(W)FLUORINATED)  
 L7 1 L5 AND COMPLETELY FLUORINATED

=> d bib abs

L7 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1995:695868 CAPLUS

DN 123:111550

OREF 123:19921a,19924a

TI Fluorinated hydrocarbon compound, process for producing the same, and refrigerator oil and magnetic recording medium lubricant

IN Ide, Satoshi; Fujiwara, Katsuki; Yamana, Masayuki; Honda, Yoshitaka; Yamamoto, Ikuo; Yamaguchi, Fumihiko; Seki, Eiji; Otsuka, Tatsuya; Ishida, Satoshi

PA Japan

SO PCT Int. Appl., 220 pp.

CODEN: PIXXD2

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9417023	A1	19940804	WO 1994-JP84	19940121 <--
	W: AU, BR, CA, CN, JP, KR, RU, US				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	CA 2154453	A1	19940804	CA 1994-2154453	19940121 <--
	CA 2154453	C	20070619		
	AU 9458658	A	19940815	AU 1994-58658	19940121 <--
	AU 688300	B2	19980312		
	EP 677504	A1	19951018	EP 1994-904753	19940121 <--
	EP 677504	B1	20031001		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	BR 9406760	A	19960305	BR 1994-6760	19940121 <--
	CN 1118156	A	19960306	CN 1994-191263	19940121 <--
	CN 1273430	C	20060906		
	EP 911312	A1	19990428	EP 1998-123495	19940121 <--
	EP 911312	B1	20041027		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE				
	RU 2145592	C1	20000220	RU 1995-117102	19940121 <--
	JP 3324117	B2	20020917	JP 1994-516865	19940121 <--
	AT 251104	T	20031015	AT 1994-904753	19940121 <--
	AT 280749	T	20041115	AT 1998-123495	19940121 <--
	US 6019909	A	20000201	US 1995-492041	19950721 <--
PRAI	JP 1993-9035	U	19930122		

EP 1994-904753

A3 19940121

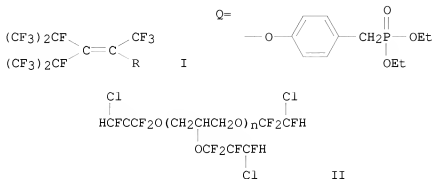
WO 1994-JP84

W 19940121

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

OS CASREACT 123:111550; MARPAT 123:111550

GI



AB A novel fluorinated hydrocarbon compound containing an oxygen or sulfur atom in its mol., e.g., R1R3C:CR2XR4 (R1, R2, R3 = F, partially or completely fluorinated C1-30 linear or branched alkyl or alkenyl optionally substituted by halogens other than F; R4 = C1-30 linear or branched alkyl or alkenyl or poly ether optionally substituted by halogens other than F; X = O, S) is prepared by the nucleophilic reaction of a fluorine compound, e.g., R1R3C:CR2F (R1 - R3 = same as above) with a hydrocarbon compound, e.g., H-XR4 (R4 = same as above). This compound is useful as a lubricant for various applications and particularly excellent as an oil for refrigerators wherein hydrochlorofluorocarbon is used as the refrigerant and as a magnetic recording medium lubricant. Thus, a mixture of perfluorononene (I; R = F), phenol, and DMF was treated with Et3N at  $\leq 25^\circ$  to give 71% perfluorononenyl Ph ether I (R = OPh) which was alkylated with chloromethyl Me ether in fuming H2SO4 at  $15^\circ$  to give 71% p-perfluorononyloxybenzyl chloride I (R = p-chloromethylphenoxy). The latter benzyl chloride was condensed with (EtO)3P(O) at  $150^\circ$  to give 84% di-Et p-perfluorononyloxybenzylphosphonate I (R = Q). A magnetic tape prepared by coating a polyethylene phthalate film with a magnetic coating containing title compound (II) as a lubricating oil showed coefficient of friction 0.22

vs.

0.40 for a magnetic tape containing F(CF2CF2CF2O)nCF2CF3.

OSC.G 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

=&gt; s 15 and perfluorinated

6862 PERFLUORINATED

L8 50 L5 AND PERFLUORINATED

=&gt; s 18 and aluminum

1131954 ALUMINIUM

L9 0 L8 AND ALUMINIUM

=&gt; s 18 and aluminium

18977 ALUMINIUM

L10 0 L8 AND ALUMINIUM

=> s l8 and boron  
269789 BORON  
L11 0 L8 AND BORON

=> s l8 and gallium  
353739 GALLIUM  
L12 0 L8 AND GALLIUM

=> s l8 and indium  
243564 INDIUM  
L13 0 L8 AND INDIUM

=> s l8 and phosphorus  
365280 PHOSPHORUS  
L14 3 L8 AND PHOSPHORUS

=> d 1-3 bib abs

L14 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1997:701402 CAPLUS

DN 127:307608

OREF 127:60173a,60176a

TI Preparation and hemolysis of amphiphilic perfluorinated  
glycophospholipids and polyethyleneglycols with liposomal compositions as  
surfactants and emulsifiers

IN Riess, Jean G.; Greiner, Jacques; Milius, Alain; Vierling, Pierre;  
Guillod, Frederic; Gaentzler, Sylvie

PA Alliance Pharmaceutical Corp., USA

SO U.S., 21 pp., Division of U.S. Ser. No. 893,227.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5679459	A	19971021	US 1995-467467	19950606 <--
	US 5846516	A	19981208	US 1992-893227	19920603 <--
PRAI	US 1992-893227	A3	19920603		

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

OS MARPAT 127:307608

AB Perfluoroalkylated amphiphilic phosphorus compds., R1R2CHXP(V)YZ  
and R2R3CH(CH2)mXP(V)YZ (V = O, S; X = O, S, NH, iminoalkyl; R1, R2, R3 =  
H or (un)substituted perfluoroalkylated or hydrocarbon radicals; Y, Z =  
sugar, polyol, hydrophilic polymer such as polyethyleneglycol; m = 1-20)  
were prepared as surfactants. These compds. can be included in prepn.s.,  
emulsions, dispersions, gels, microemulsions, notably for biomedical uses.  
Thus, [2-(perfluorooctyl)ethyl]-6-D-glucosyl sodium phosphate (I) was  
prepared as surfactants and tested for hemolysis (30 g/L) and toxicity in  
mice (dose = 125, survival 10/10). Formulation of perfluorodecalin and  
perfluorooctyl bromide with I is reported.

OSC.G 10 THERE ARE 10 CAPLUS RECORDS THAT CITE THIS RECORD (11 CITINGS)

RE.CNT 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1996:331480 CAPLUS

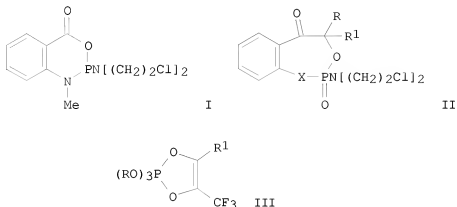
DN 125:86736

OREF 125:16369a,16372a

TI New phospholene and phosphopine derivatives from  $\lambda$ 3-  
phosphorus compounds and hexafluoroacetone or  
perfluorinated  $\alpha$ -diketones

AU Kadyrov, Alexander; Neda, Ion; Kaukorat, Thomas; Sonnenburg, Ralf;

Fischer, Axel; Jones, Peter G.; Schmutzler, Reinhard  
 CS A. N. Nesmeyanov Institute of Organoelement Compounds, Russian Academy of  
 Sciences, Moscow, 117813, Russia  
 SO Chemische Berichte (1996), 129(6), 725-732  
 CODEN: CHBEAM; ISSN: 0009-2940  
 PB VCH  
 DT Journal  
 LA German  
 OS CASREACT 125:86736  
 GI



AB The reaction of the bis(2-chloroethyl)amino-substituted benzoxazaphosphorinone I with (F3C)2CO proceeds with insertion of the carbonyl group of (F3C)2CO into the heterocycle of I to form the oxazaphosphepinedione II (R, R1 = CF3; X = O, NMe). (EtO)3P and (PhO)3P react with F3CCOCOCF(CF3)2 or F3CCOCOCF(CF2)2CF3 with formation of the pentaoxyphosphoranes III [R = Et, Ph; R1 = CF(CF3)2, (CF2)2CF3]. The reaction of the (2-chloroethyl)amino- and bis(2-chloroethyl)amino-substituted 1,3,5,2-triazaphosphorinanediones with F3CCF2COCOCF3 furnishes spiroposphorane derivs. with the dioxaphospholene ring system in two cases only. Compound I and 2-[bis(2-chloroethyl)amino]-4H-1,3,2-benzodioxaphosphorin-4-one react with the perfluorinated  $\alpha$ -diketones F3C(CO)2CF(CF3)2 or F3C(CO)2(CF2)2CF3 with insertion of the diketones into the heterocycle with formation of compds. containing dioxo- and oxazaphosphepinone ring systems. The expected oxidative addition of the diketones to  $\lambda$ 3P with formation of spiroposphoranes was not observed. Compds. II [X = O, NMe; R = CF3; R1 = COCF(CF3)2, CO(CF2)2CF3 or R = CF(CF3)2, (CF2)2CF3; R1 = COCF3] were obtained as mixts. of isomers. Single crystal x-ray structure analyses were conducted on II (R = R1 = CF3; X = NMe) (IV) and III [R = Ph, R1 = CF(CF3)2] (V). The 7-membered ring of IV is in a boat conformation, with the O and benzo C atoms lying out of the plane of the other 4 atoms. The 2 independent mols. of V are similar, but differ in the degree of distortion from trigonal-bipyramidal geometry of P.

OSC.G 14 THERE ARE 14 CAPLUS RECORDS THAT CITE THIS RECORD (14 CITINGS)

L14 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2009 ACS on STN  
 AN 1994:332354 CAPLUS  
 DN 120:332354  
 OREF 120:58297a,58300a  
 TI The Empirical Treatment of Solvent-Solute Interactions: 15 Years of  $\pi^*$   
 AU Laurence, Christian; Nicolet, Pierre; Dalati, M. Tawfik; Abboud, Jose-Luis  
 M.; Notario, Rafael

CS Laboratoire de Spectrochimie Moleculaire, Universite de Nantes, Nantes,  
F-44072, Fr.

SO Journal of Physical Chemistry (1994), 98(23), 5807-16  
CODEN: JPCHAX; ISSN: 0022-3654

DT Journal

LA English

AB The near-UV-visible spectra of 4-nitroanisole (OMe) and  
N,N-dimethyl-4-nitroaniline (NMe2) were obtained at  $25.0 \pm 0.1^\circ$   
in the gas phase and in a set of 229 solvents that includes  
non-hydrogen-bond donors such as hydrocarbons (aliphatic, alicyclic,  
ethylenic, and aromatic), perfluorinated and other halogenated  
hydrocarbons (aromatic and nonarom.), nitriles, ketones, esters, lactones,  
anhydrides, amides, ureas, phosphates, HMPA, sulfates, sulfites,  
sulfoxides, sulfones, pyridines, and tertiary amines as well as weak  
hydrogen-bond donors such as nitrocompounds and primary and secondary  
amines. The frequencies of the absorption maximum of these spectra were used  
to refine and critically examine the  $\pi^*$  scale of solvent effects. The  
dielec. consts. and refractive indexes of the solvents (mostly from this  
work) were used in an Oshika-Bayliss-McRae (OBM) treatment of these  
frequencies that led to the following results: (i) The partitioning of  
dipolarity and polarizability contributions to  $\pi^*$ ; (ii) the quant.  
assessment of more specific contributions to  $\pi^*$  due to aromatic solvents.  
This study also showed the limitations of the OBM treatment and the  
advantages of the empirical approach. General conclusions regarding the  
phys. meaning and the use of scales of solvent effects (excluding hydrogen  
bonding) were drawn.

OSC.G 197 THERE ARE 197 CAPLUS RECORDS THAT CITE THIS RECORD (197 CITINGS)

=> s l8 not l14  
L15 47 L8 NOT L14

=> d his

(FILE 'HOME' ENTERED AT 12:33:15 ON 11 DEC 2009)

FILE 'REGISTRY' ENTERED AT 12:33:48 ON 11 DEC 2009

L1 STRUCTURE UPLOADED  
L2 50 S L1  
L3 97771 S L1 FULL

FILE 'CAPLUS' ENTERED AT 12:36:04 ON 11 DEC 2009

L4 131193 S L3  
L5 110765 S L4 AND PY<=2004  
L6 10 S L5 AND PARTIALLY FLUORINATED  
L7 1 S L5 AND COMPLETELY FLUORINATED  
L8 50 S L5 AND PERFLUORINATED  
L9 0 S L8 AND ALUMINUM  
L10 0 S L8 AND ALUMINIUM  
L11 0 S L8 AND BORON  
L12 0 S L8 AND GALLIUM  
L13 0 S L8 AND INDIUM  
L14 3 S L8 AND PHOSPHORUS  
L15 47 S L8 NOT L14

=> s l8 and arsenic  
131817 ARSENIC  
L16 0 L8 AND ARSENIC

=> s l8 and antimony  
131368 ANTIMONY  
L17 0 L8 AND ANTIMONY

```

=> s l8 and fluorinated alkoxy
    43183 FLUORINATED
    129832 ALKOXY
        79 FLUORINATED ALKOXY
            (FLUORINATED(W)ALKOXY)
L18      0 L8 AND FLUORINATED ALKOXY

=> s l8 and partially fluorinated alkoxy
    369980 PARTIALLY
    43183 FLUORINATED
    129832 ALKOXY
        3 PARTIALLY FLUORINATED ALKOXY
            (PARTIALLY(W)FLUORINATED(W)ALKOXY)
L19      0 L8 AND PARTIALLY FLUORINATED ALKOXY

=> s l8 and perfluorinated alkoxy
    6862 PERFLUORINATED
    129832 ALKOXY
        7 PERFLUORINATED ALKOXY
            (PERFLUORINATED(W)ALKOXY)
L20      0 L8 AND PERFLUORINATED ALKOXY

=> s l8 and completely fluorinated alkoxy
    422987 COMPLETELY
    43183 FLUORINATED
    129832 ALKOXY
        0 COMPLETELY FLUORINATED ALKOXY
            (COMPLETELY(W)FLUORINATED(W)ALKOXY)
L21      0 L8 AND COMPLETELY FLUORINATED ALKOXY

=> s l8 and trialkoxy
    803 TRIALKOXY
L22      0 L8 AND TRIALKOXY

=> s l8 and tert-butylalkoxy
    300058 TERT
        1 BUTYLALKOXY
        0 TERT-BUTYLALKOXY
            (TERT(W)BUTYLALKOXY)
L23      0 L8 AND TERT-BUTYLALKOXY

=> s l8 and tert-butyl alkoxy
    300058 TERT
    316785 BUTYL
    129832 ALKOXY
        3 TERT-BUTYL ALKOXY
            (TERT(W)BUTYL(W)ALKOXY)
L24      0 L8 AND TERT-BUTYL ALKOXY

=>

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Executing the logoff script...

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=> LOG Y

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	ENTRY	SESSION
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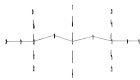
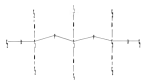
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<http://www.cas.org/support/stngen/stdnoc/properties.html>

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chain nodes :
2 3 5 6 7 9 10 11 12 13 14 15 16 17 18 19 20 21 23 24 25
chain bonds :
2-3 2-6 2-9 2-10 3-5 6-7 9-11 10-12 11-13 11-14 11-15 12-16 12-17
12-18 13-20 14-19 15-21 16-25 17-23 18-24
exact/norm bonds :
2-3 2-6 2-9 2-10 3-5 6-7 9-11 10-12 11-13 11-14 11-15 12-16 12-17
12-18 13-20 14-19 15-21 16-25 17-23 18-24

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G1:B,Al,Ga,In,P,As,Sb

G2:Cb,Cy,Hy,Ak

```

Match level :
2:CLASS 3:CLASS 5:CLASS 6:CLASS 7:CLASS 9:CLASS 10:CLASS 11:CLASS 12:CLASS
13:CLASS 14:CLASS 15:CLASS 16:CLASS 17:CLASS 18:CLASS 19:CLASS 20:CLASS
21:CLASS 23:CLASS 24:CLASS 25:CLASS

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L1 STRUCTURE UPLOADED

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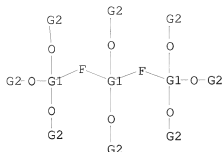
L1 STRUCTURE UPLOADED

=> d l1

L1 HAS NO ANSWERS

L1 STR





G1 B,Al,Ga,In,P,As,Sb

G2 Cb,Cy,Hy,Ak

Structure attributes must be viewed using STN Express query preparation.

=> s l1

SAMPLE SEARCH INITIATED 21:33:28 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 111 TO ITERATE

100.0% PROCESSED 111 ITERATIONS

0 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*

BATCH \*\*COMPLETE\*\*

PROJECTED ITERATIONS: 1588 TO 2852

PROJECTED ANSWERS: 0 TO 0

L2 0 SEA SSS SAM L1

=> s l1 full

FULL SEARCH INITIATED 21:33:33 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 2032 TO ITERATE

100.0% PROCESSED 2032 ITERATIONS

2 ANSWERS

SEARCH TIME: 00.00.01

L3 2 SEA SSS FUL L1

=> fil caplus

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SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

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FILE LAST UPDATED: 10 Dec 2009 (20091210/ED)  
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Oct 2009  
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Aug 2009

CAPLUS now includes complete International Patent Classification (IPC)  
reclassification data for the third quarter of 2009.

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<http://www.cas.org/legal/infopolicy.html>

This file contains CAS Registry Numbers for easy and accurate  
substance identification.

=> s l3

L4 1 L3

=> d bib abs

L4 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2005:523465 CAPLUS

DN 143:37559

TI Method for the production of salts of weakly fluorinated alcoholato  
complex anions of main group elements

IN Krossing, Ingo; Gonsior, Marcin; Mueller, Lutz

PA Universitaet Karlsruhe TH, Germany

SO PCT Int. Appl., 27 pp.

CODEN: PIXXD2

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005054254	A1	20050616	WO 2004-EP12220	20041028
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
	RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
	DE 10356768	A1	20050707	DE 2003-10356768	20031204
	EP 1689756	A1	20060816	EP 2004-790989	20041028
	EP 1689756	B1	20070815		
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK			
	AT 370150	T	20070915	AT 2004-790989	20041028
	US 20080033195	A1	20080207	US 2007-580974	20070612
PRAI	DE 2003-10356768	A	20031204		
	WO 2004-EP12220	W	20041028		

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

OS MARPAT 143:37559

AB The invention relates to a method for the production of weakly  
fluorinated alcoholato complex anions according to the following formulas,  
M[FX(ORF)m]z (1) M[(FRO)mXFX(ORF)m]z (2) and M[(FRO)mXFX(ORF)nFX(ORF)m]z

(3) (X = B, Al, Ga, In, P, As, Sb; M = monovalent or divalent cation; n = 2 for m = 3 or n = 4 for m = 5; y = 1-2). For example, Ag[FA1(OC(CF3)3)3] in 98 % yield was prepared by the reaction of AlMe3 with HOC(CF3)3 in presence of AgBF4 in pentane.

OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)  
 RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

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---Logging off of STN---

=>

Executing the logoff script...

=> LOG Y

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	3.50	189.60
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	-0.82	-0.82

STN INTERNATIONAL LOGOFF AT 21:34:05 ON 11 DEC 2009